



## Land Uses

### Residential



Side Yard Brooklyn NY

### Commercial



Bio retention Pennsylvania Ave

### Municipal



Infiltration Planter NYC

# STORM WATER

## Did you Know?

Urbanization and increase in impervious cover areas are significant threats to the protection of high quality drinking water sources and aquatic habitats.

## References and Additional Resources

- [https://www.epa.gov/sites/production/files/2015-02/documents/gi\\_brochure\\_508\\_compliant.pdf](https://www.epa.gov/sites/production/files/2015-02/documents/gi_brochure_508_compliant.pdf)
- <http://www.6sqft.com/wp-content/uploads/2014/11/Bioswale2.jpg>
- <https://blakesamper.files.wordpress.com/2013/03/bioswale.jpg>
- <http://www.esf.edu/ere/endreny/GICalculator/BioswaleIntro.html>
- <http://greencampsinitiative.org/wp-content/uploads/2015/04/bioswales1.pdf>
- <https://www.columbus.gov/Templates/Detail.aspx?id=53960>
- <http://ecobrooklyn.com/bioswale-basics/>
- <http://www.haas-la.com/bioretenation.html>
- <http://www.binghamton-ny.gov/ordinance/erosion-control>
- <http://www.binghamton-ny.gov/illegal-discharge-detection-and-elimination>
- <http://www.binghamton-ny.gov/departments/planning-housing-community-development/planning-housing-community-development>
- <http://www.binghamton-ny.gov/stormwater-management>
- Bioswale Brochure May 2016

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City of Binghamton

Informational Brochure



## BIOSWALES

VEGETABLE SWALES / DRY SWALES



A BIOSWALE CAN BE USED ALONG  
ROADWAYS AS WELL AS IN PARKING LOTS.



# Bioswales

A bioswale is a linear, vegetated ditches which allow for the collection, conveyance, filtration and infiltration of stormwater. They can also be referred to as "grass swales," "vegetated swales," or "filter strips."

They are planted with deep-rooted native grasses and plants that enhance infiltration, cooling, and cleansing of water in order to improve water quality.

Ch. 227  
Erosion Control and  
Stormwater Management

The City of Binghamton offers two grant opportunities to Binghamton residents and business owners interested in implementing green infrastructure projects:

- 50/50 Stormwater Management Fund
- Green Stormwater & Landscaping Matching Fund

## How Do they Work?

A bioswale is a ditch that allows for rainwater to soak into the earth slowly, rather than flooding streets or going into the ocean.

Here's how it works:

1 Stormwater runoff from streets and parking lots enters the bioswale through a gradual slope.

3 The water slowly filters through the roots of native plants, where a majority of automobile pollutants are removed.

2 Once the water enters the bioswale, it slowly seeps into the soil.

4 The water enters a secondary filtration level usually made of sand, gravel, or rock.

5 Lastly, the purified water slowly makes its way to the local aquifer.

## Consideration for Design

When designing a bioswale, it is best to seek expert guidance. The main elements to consider are:

- **Slope** – Make sure the bioswale is shallow enough to slow down the water so that it absorbs into the soil, but steep enough to keep water from stagnating.
- **Width** – How much space do you have? The wider the bioswale, the more water absorbed.
- **Location** – As enticing as the bioswale will appear, people should be educated on its use and taught to avoid walking in its pathway.
- **Native plants** – Your landscape should situate plants according to how much water they need – the thirsty plants should be placed in the area that will receive the most water.